

# CHAPTER 8

## COMPARING FSA TO COMMERCIAL PRICES

### Introduction

We perform two types of price comparisons in this chapter. First, we compare price levels by matching the prices that FSA receives in auctions for several commodities with prices quoted by manufacturers to private sector clients for closely related commodities. Second, we compare price trends by matching changes in FSA prices over the 1992-96 period to well-known indexes of food price inflation for related commodities.

### Comparisons of FSA Price Levels with Comparable Private Sector Prices

#### Method of Comparing Prices

One of our major goals was to compare the prices realized in FSA auctions with those that could be obtained through private sector purchasing. To do that, we solicited the cooperation of a major foodservice wholesaler. Foodservice firms take deliveries to their own warehouses from food manufacturers, and provide food products and support services to restaurant and fast food chains, schools, commercial kitchens, hospitals, and other large providers. Such firms operate as prime vendors in the VA and DoD food procurement systems. Foodservice warehouses are the appropriate point of price comparison for FSA because the firms order large volumes of products from manufacturers, take delivery in truckload lots, and are located at the same level of the distribution chain as the State and commercial warehouses that receive FSA commodities.

The cooperating firm provided us with data on 1996 manufacturer prices for delivery to the firm's warehouses. We asked the firm to provide price data for their highest quality private-label product because we felt that was most comparable with USDA products. In some cases, we received branded product prices rather than private-label, and we note those cases in our discussion. We strove to compare identical package sizes and product characteristics, but at times, had to compare closely related (rather than identical) products; we define product characteristics, and any adjustments that we made, in the discussion below.

Some FSA product prices can vary sharply by geographic region. Consequently, we asked for prices for delivery to several different States served by the foodservice firm—California, Texas, Illinois, and Massachusetts. Because FSA prices show some seasonal variability, we also asked for two time periods—April and September 1996.

The cooperating foodservice firm was able to provide us only with September data for peanut butter and pasta, and only on a nationwide price quote. We therefore compared those prices to nationwide average FSA prices for September 1996. In addition, FSA data show few 1996 auctions for delivery to two of the cooperator's States, Illinois and Massachusetts, so we used mean FSA prices for points in Illinois, Indiana, and Wisconsin for comparison with foodservice prices in the firm's Illinois district. We also used mean FSA prices for delivery throughout New England for comparison to the Massachusetts District. FSA prices vary

little (1-2 percent) within each region, and FSA mean prices, therefore, are not driven by any unusual price quotes from remote locations.

## Results of Price Comparisons

Table 8-1 reports the results of our price comparisons. In general, FSA prices were substantially below those reported by the private sector firm, with a gap of about 30 percent being most common. We discuss each commodity in turn; we discuss flour last, since it presents a more complicated pattern.

**Liquid Shortening and Vegetable Oil.** We obtained private-sector prices for truckload delivery in cases containing six 1-gallon containers, and compared them with FSA auction prices for identical package sizes. We had only limited FSA California data (for September delivery of vegetable oil), but could perform price comparisons for both months for all other locations. Our results show substantial price advantages for FSA, larger in the fall than in the spring. On average, FSA shortening prices were 31.5 percent below private sector prices in September and 26.5 percent lower in April. Vegetable oil prices averaged 34.9 percent lower in September (excluding those for California, which would expand the gap more) and were 28.8 percent lower, on average, in April.

**Pasta.** We compared prices for truckload delivery of 20-lb. cartons of three products—spaghetti, elbow macaroni, and rotini. We used nationwide average prices for FSA data, for September 1996, and the results were quite consistent across the three products (table 8-1): FSA prices were consistently 37-38 percent lower than private sector prices. Our cooperator did not specify whether the price quotes were for a branded or private-label product, but branding should not be an important price factor in this (20-pound) package size.

**Peanut Butter.** The cooperator provided price quotes for delivery of truckload quantities of a branded smooth peanut butter in cases of 12 24-ounce containers. FSA prices are quoted for delivery of truckload quantities of smooth peanut butter in cases of 24 32-ounce containers. Our data show that FSA prices were, on average, 17.6 percent below those of the private sector product in September 1996. Because the private sector containers are slightly smaller, they should carry a higher price for the added convenience, but we did no direct adjustment because we had no basis for one. Based on our

experience with other price comparisons, we would estimate that the container difference accounts for about 2 percent of the 17.6 percent gap. Another point of difference in this comparison was that we had to match a USDA-labeled product with a branded product, and many purchasers might prefer to pay a price gap of this size in exchange for the greater perceived quality assurance associated with the branded product.

**All-Purpose and Bakery Flour.** The flour results show a strong temporal shift consistent with other ERS research on flour pricing. The cooperator provided us with data for the delivery of all-purpose flour in truckload quantities of cases containing eight 5-pound bags, and for delivery of truckload quantities of bread flour in 50-pound bags. The quoted prices were for a branded product, and branded products carry a modest price premium at small package sizes (5-pound bags) in flour. Prices for three locations (California, Texas, and Illinois) and 2 months (April and September) were cited. FSA runs some auctions for delivery of all-purpose flour in 5-pound bags, but 10-pound bags were far more common in 1996, so we also used FSA 10-pound auctions and adjusted those prices up by 2 percent, the package size premium estimated in our price regressions. FSA purchases bread flour in 50-pound bags, the same size as the cooperator.

FSA all-purpose flour prices were substantially below private sector prices in April: by 31.5 percent for Texas delivery, 31.1 percent for Illinois, and 7.8 percent for California (the cooperator's California prices were estimated and are considerably less reliable). But in September, FSA prices were only 14.3 percent below private sector prices in Texas and California and 17.4 percent lower in the upper Midwest.

Bread flour is a far thinner FSA market; there were no FSA auctions for the relevant months in Texas and California. In Illinois, FSA prices were 21.7 percent below corresponding private sector prices in April, but in September, were quite close to private sector quotes (3.5 percent lower), consistent with the all-purpose flour results. Finally, FSA prices rose sharply in October and November 1996 to levels above the September private sector prices (we do not have access to the cooperator's later prices).

Why are September prices so much closer? In brief, the data show that FSA prices rise during the fall, while private sector prices decline. Three factors drive the

seasonal increase in FSA prices. First, wheat prices (the primary material cost) show some seasonal variation, and typically rise slightly in the fall. Second, flour demand rises quite sharply during the fall. FSA bidders bid more aggressively when they expect to have excess production capacity, and they have little excess capacity at that time; as a result, they include capacity charges in their fall bids. Finally, and also because of capacity limits, fewer firms bid in fall FSA auctions, leading to higher bids. In short, FSA prices rise because costs rise and also because FSA auctions become less competitive in the fall.

In contrast to FSA price patterns, retail prices for flour typically drop sharply in the fall, by as much as 20 percent, just as demand is increasing sharply. Other ERS research has identified patterns of falling prices in the face of seasonal demand surges for most retail food products with strong seasonal demand swings, and the pattern appears to be quite strong for flour. Prices in retail markets move closer to costs in the fall apparently because seasonal demand surges lead to greater competition among flour manufacturers for retail markets. This results in prices that fall quite sharply relative to FSA prices.

### Some Caveats

Table 8-1 shows that FSA prices fall substantially below corresponding private sector prices in most cases. We should keep three cautions in mind.

First, representatives from the cooperating foodservice firm feel that their quoted prices are not the minimum that a client could receive from manufacturers. In particular, clients wishing to make significant volume commitments can sometimes obtain lower manufacturer prices, and manufacturers sometimes offer lower prices to certain classes of buyers, including government agencies. We did not seek out those sorts of prices because they are substantially more difficult to obtain, being quoted on a case-by-case basis. In addition, we compared cooperator prices with average FSA prices in a given month, not to the lowest obtainable FSA prices, and we compared with FSA auctions that did not entail long-lasting volume commitments (such as are currently done in FSA infant formula auctions). Therefore, we decided that the cooperator prices that we did have represented an appropriate basis for comparison.

The second caution is that we compared prices for commodity categories in which FSA currently does a significant amount of purchasing, and which therefore have passed a type of market test. That is, clients who choose to purchase these products through FSA presumably do so because they find that FSA can obtain these products at substantial discounts compared with what the clients can do for themselves. Our comparisons, therefore, have focused on those products where FSA's buying advantages may be the greatest, and one should be cautious about extending these results to products that are not currently purchased by FSA.

Finally, we remind readers that FSA and prime vendor systems are designed to do different things. FSA's food procurement strategies are designed to obtain large quantities of a few basic food products, and to obtain them at the lowest possible manufacturers' prices, subject to USDA product specifications. Foodservice firms are in the business of delivering a wide variety of food products to clients on a timely basis; in other words,

**Table 8-1: Comparing FSA prices with comparable private sector prices**

Product and location	FSA price divided by private sector price	
	April 1996	September 1996
Liquid shortening:		
Texas	0.734	0.683
IL/IN/WI	0.733	0.685
New England	0.737	0.685
Vegetable oil:		
California	n.r.	0.585
Texas	0.712	0.683
IL/IN/WI	0.764	0.718
New England	0.670	0.552
All-purpose flour:		
California	0.932	0.867
Texas	0.685	0.867
IL/IN/WI	0.689	0.826
Bread flour:		
IL/IN/WI	0.793	0.965
Pasta—nationwide:		
Spaghetti	n.r.	0.629
Macaroni	n.r.	0.621
Rotini	n.r.	0.622
Peanut butter:		
Nationwide	n.r.	0.824

Note: "n.r." means that no cooperator price was reported for that month.

they target several goals other than price. Depending on their goals, clients may rationally decide to purchase through a foodservice wholesaler, even if an FSA auction strategy can obtain lower manufacturer prices, because of the additional services provided by the food-service wholesaler.

### Comparing Price Trends in FSA Commodities

In the previous section, we compared price levels of products purchased under FSA and private sector procurement strategies. ERS was also asked to investigate trends in FSA prices to see if those trends matched price trends for private sector purchases of the products that FSA buys. This is a much more difficult and uncertain task because we do not have access to comparable prices for specifically defined products going back in time. To perform that comparison, we obtained Producer Price Index (PPI) data from the Bureau of Labor Statistics (BLS). The PPI aims to measure changes in net prices received by manufacturers for precisely defined products. BLS produces PPI indexes that closely match four FSA commodities—all-purpose flour, baker’s flour, pasta, and vegetable oil. BLS does not produce a PPI for peanut butter, but does produce one for peanuts.

FSA buys a variety of different specific package types and product types within the broad commodity categories, and obtains bid prices for delivery to particular locations across the country. Systematic changes in locations, product characteristics, and container sizes could affect average FSA prices over time, even if there were no changes in bid prices for delivery of precisely defined products to precisely defined locations. To control for the possible effects of location, product type, and container size, we ran regressions with those variables in them: separate year effects then captured FSA price trends. Results are summarized in table 8-2. Price increases for FSA products were close to 1992-96 PPI changes for two products, bakery flour and vegetable oil, but substantially exceeded PPI growth in pasta and peanut butter. In each of the latter two cases, FSA prices rose about 4.5 percent per year faster than the corresponding PPI. In the fifth category, all-purpose flour, FSA prices rose modestly faster than the PPI.

We performed a second comparison using A.C. Nielsen data on average supermarket prices. The Nielsen data are derived from electronic scanners at supermarkets,

and measure changes in what consumers pay at retail for items, rather than what manufacturers receive. The scanner data provide measures of the average price per ounce for all-purpose flour or all peanut butter sold in U.S. supermarkets; since the data cover the period 1989-96, they overlap with the FSA data. The supermarket product definitions match up well with FSA definitions (for example, peanut butter is captured), and may represent an important source of price comparison for FSA clients, such as school lunch purchase agents.

FSA prices grew sharply faster than supermarket prices in all four comparison categories. The differences are again quite striking for pasta, where supermarket prices rose very slightly in line with the PPI, and also in all-purpose flour and in peanut butter, where the supermarket measure captures a more appropriate price comparison than the PPI does.

We made one further decomposition of the retail price data, by looking separately at price trends for private-label products. Those are products that are made by processors at the direction of a supermarket chain or a wholesaler that supplies supermarkets, and that carry the chain or wholesaler label. In that sense, they are similar to FSA products, which are also made by processors to USDA specifications and for a USDA label. Private-label price trends are below trends for FSA products (table 8-2), but are relatively close, except for pasta.

**Table 8-2: Comparing price trends in FSA auctions with related price indexes**

Commodity	Producer price index	Average supermarket prices	Private-label prices	FSA prices (low bids)
<i>Percent increase in prices, 1992-96</i>				
All-purpose flour	24.6	17.9	22.2	32.6
Bakery flour	26.2	—	—	22.3
Pasta	7.8	8.1	9.9	25.3
Vegetable oil	20.4	11.7	15.0	18.2
Peanut butter	-14.4	-7.7	3.1	4.4

Notes: FSA price trends are derived from the coefficients on year terms in regression analyses of low bids that also included product characteristics, fixed monthly effects (for seasonality), and fixed State effects. The Producer Price Indexes measure 1992-96 changes in annual averages for the most closely related products, while average and private-label supermarket prices reflect December 1992 to December 1996 changes in the weighted average price per ounce of closely related supermarket categories. The measures are based on supermarket scanner data, and the weights are sales weights assigned to each item in a category.

There is one strong explanation for more rapidly rising FSA prices. Agricultural commodity prices generally rose sharply during 1992-96. For example, prices for durum wheat, the major pasta ingredient, were 75 percent higher in the spring of 1996 than in 1992. Prices fell by the fall of 1996, but were still 40 percent higher than they had been 4 years before. By mid- to late 1996, prices for the hard and soft wheats used in flour averaged 30 percent above their levels 4 years earlier, in 1992.

Millers pay the same prices for wheat, whether they are producing for FSA purchases or for private sector purchases. Could agricultural price increases nevertheless have stronger effects on FSA prices? Yes, if wheat accounts for a greater share of the costs of manufacturing FSA products. If FSA prices are lower (and they appear to be) and if FSA products use the same amounts of wheat as private sector products (also true), then wheat costs will be a larger share of the total costs of producing FSA products than others. Increases in wheat prices ought to lead to greater percentage increases in FSA product prices than in average manufacturer or retail prices for the corresponding products. Retail prices also include the costs of providing retail services, which means that ingredient costs will have a still smaller percentage impact on retail prices than on FSA prices. By the same reasoning, FSA prices ought to fall more sharply when wheat prices are falling than average manufacturer and retail prices. In short, FSA prices should be noticeably more sensitive to input costs, both temporally in response to fluctuations in agricultural prices and spatially in response to differences in transport costs. The data in table 8-2 are consistent with that interpretation; we could have more

confidence in it if we could also compare FSA price trends with manufacturer and retail price indexes during periods of agricultural price declines.

## Conclusion

FSA appears to be able to obtain substantial price savings on the five commodities that we investigated, with 30-40 percent gains being common. We caution, however, that the comparison is at present based on a limited sample of commodities and on comparison to prices quoted by manufacturers to one large foodservice wholesaler.

Because FSA prices appear to be more sensitive than private sector prices to geographic location and to movements in underlying agricultural commodity prices, the FSA price advantage will also vary temporally and geographically. FSA prices will be lowest, relative to comparable private sector prices, near production centers and during periods of low agricultural commodity prices. Moreover, FSA's advantage is likely to be greater on common package sizes and product types, where the agency can induce greater competition in auctions.

Recent price trends suggest that FSA prices for pasta and peanut butter products have risen sharply compared with average manufacturer prices. In the case of pasta, FSA prices still appear to be far below private sector prices; however, FSA peanut butter prices are moving closer to private sector levels. When combined with perceived quality problems, many clients may not view FSA peanut butter as an attractive purchase.